representative, Grace Law. The substance of the interview is set forth in the Examiner's Interview Summary Record, which is of record as Paper No. 6. Favorable reconsideration of claims 1-41 is requested in view of the following remarks.

In the Office action mailed January 15, 2003, claims 1, 3-7, 9-14, 16-18, and 20-31 are rejected as being anticipated by U.S. Patent No. 6,044,081 to Bell et al. (hereafter "Bell"). The remaining claims 2, 8, 15, and 19 are rejected as being obvious over Bell in view of U.S. Patent No. 5,881,247 to Dombrosky et al. (hereinafter "Dombrosky").

The following remarks are grouped to reflect the organization of the Office action.

APPLICANTS' RESPONSE

Section 112 rejection, First Paragraph – Claim 7

Claim 7 is rejected under 35 U.S.C. §112, first paragraph, for minor informalities. In response, claim 7 has been amended to correct the minor informalities suggested by the Office action, without narrowing its scope, since the amendment constitutes merely cosmetic changes. Applicants request that the Section 112, first paragraph, rejection of claim 7 be withdrawn.

Section 102 rejection – Claims 1, 3-7, 9-14, 16-18, and 20-31

Applicants traverse the rejection of claims 1, 3-7, 9-14, 16-18, and 20-31 under 35 U.S.C. §102(e) as being anticipated by Bell et al, because the transaction and messages as recited in the claims do not respectively correspond to the MAC frame and the Q.921 frame. More specifically, the recited transaction and message are application-oriented constructs while the MAC frame and Q.921 frame 400 are network data communication constructs facilitating reliable transmission of the actual data associated with the messages and transactions.

Bell et al. teaches transmitting a MAC frame by encapsulating it within a Q.921 frame 400 (Col. 17, lines 36-45 and Col. 18, lines 55-56). However, the MAC frame format 300 and the Q.921 400 are protocols apparently relating to the data link and network layers of the network (Col. 18, lines 18-30).

In contrast, the application oriented transactions and messages recited in claim 1 (and described in the specification) pertain to applications tracking completion of database

transactions (e.g., recording an order, a purchase, etc.). In particular, the present invention relates to a protocol for a message transaction system that ensures that data is not lost by the application if the system crashes. The application oriented message handling protocol also ensures that two copies of the same transaction are not processed (Applicants' specification, page 1, lines 9-11). Thus, in the context of the disclosed invention, a transaction refers to an activity or a request performed by an application, such as an order, a purchase, a change, or an addition to a database of information, and the transaction can include one or more messages (Applicants' specification, page 1, lines 11-16). The MAC frame and the Q.921 frame 400 described in Bell et al. relate to the layers of the network protocol stack that seek to ensure that the content of a frame of data makes it between sender and receiver nodes in a network. The recited and disclosed transaction and messages of the present invention are utilized by applications to track completion of application-oriented tasks. Thus, Bell et al. does not disclose or suggest the transaction and the messages of the transaction, as recited in independent claims 1, 6, 12, 17, 21, 24, 26, 27, and 29-31.

Claims 3-5, 7, 9-11, 13-14, 16, 18, 20, 22-23, 25, and 28 are patentable for at least the same reasons as independent claims 1, 6, 12, 17, 21, 24, and 27, from which they respectively depend. Accordingly, Applicants request that the Section 102 rejection of claims 1, 3-7, 9-14, 16-18, and 20-31 be withdrawn. Applicants reserve the right to present further arguments in the future with regard to the dependent claims in the event that the independent claims are found to be unpatentable.

Section 103 rejection – Claims 2, 8, 15, and 19

Claims 2, 8, 15, and 19 are rejected under 35 U.S.C. §103(a) as being unpatentable over Bell in view of Dombrosky et al. (U.S. Patent No. 5,881,247). Claim 2, 8, 15, and 19 are patentable for at least the reasons set forth above with regard to independent claims 1, 6, 12, and 17, from which they respectively depend. Accordingly, Applicants request that the Section 103 rejection of claims 2, 8, 15, and 19 be withdrawn. Applicants reserve the right to present further arguments in the future with regard to the dependent claims in the event that the independent claims are found to be unpatentable.

New Claims – Claims 32-42

Moreover, Applicants have added claims 32-42 to more clearly recite the feature of tagging a first message and a last message of a transaction with a first-message identifier and a last-message identifier, wherein any other messages of the transaction are not sequentially tagged. Applicants submit that this feature is not disclosed in Bell et al.

Bell et al. teaches sequential assignment of a segment number field 520 for each Q.921 frame 400, which reflects the order of the frames 400. Specifically, Bell et al. describes multiple ordered Q.921 frames 400 of a Media Access Control (MAC) frame format 300, and each frame 400 includes an information field 420 (Col. 18, lines 27-29). Within the information field 430, a segment number field 520 is included having a value that is sequentially assigned according to the order of the multiple frames 400 (Col. 20, lines 54-65). Thus, every frame 400 in the series is tagged with a value to indicate the order of the frames. In order to determine whether an error occurred during the transmission of the frames 400, the process disclosed in Bell (1) checks whether a new message number value indicating a new MAC frame sequence is received and (2) compares the segment number field 520 against the actual received frame length (Col. 21, lines 8-15). As a result, the process requires a complicated algorithm to count and track the order of the frames 400 and thus sequentially tag every message of a transaction.

In the recited invention, however, no such protocol is employed to track the order of intervening messages falling between a first and last message of a transaction. The first and last messages of a transaction are tagged with a first-message and last-message identifier, respectively. The other messages of the transaction are not sequentially tagged. Successful transmission or receipt of a transaction is achieved by merely determining whether the last-message identifier is received after the first-message identifier. In other words, by simply checking only for the first-message and the last-message identifier, the present invention provides a transaction boundary-based error-check system. Other, lower-level network communication protocols ensure that the transaction is complete (i.e., all the messages were received). As shown, Bell fails to disclose or suggest these features of tagging the first and last message of a transaction with a first-message and a last-message identifier, and specifically not sequentially tagging to intervening messages as recited in new claims 32-42.
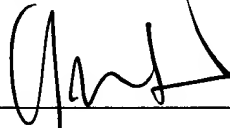
In view of the foregoing amendments and remarks, Applicants submit that the present application is in condition for allowance. An early and favorable action is earnestly requested.

CONCLUSION

The application is considered in good and proper form for allowance, and the examiner is respectfully requested to pass this application, including pending claims 1-42, to issue. If, in the opinion of the examiner, a telephone conference would expedite the prosecution of the subject application, the examiner is invited to call the undersigned attorney.

Respectfully submitted,

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